LISTING OF CLAIMS:

What is claimed is:

Claim 1. (**WITHDRAWN**): A method for processing bioresponse signals coming from organisms living in a well-defined living space, which are each comprised in a microenvironment, wherein the bioresponse signals are obtained in online measuring of bioresponse variables, the bioresponse signals being processed in at least real-time in a signal processor, wherein the organisms are monitored in the said microenvironments, the bioresponse variables being adjusted by corresponding signal control apparatuses in accordance with a living space control model, wherein the living space comprises an incubator for hatching out hatching eggs, wherein the bioresponse variables are measured and controlled by at least one of optical, electrical, magnetic, acoustic or mechanical bioresponse signals.

Claim 2. (**WITHDRAWN**): A method according to claim 1, wherein the bioresponse signals are non-invasively measured.

Claim 3. (**WITHDRAWN**): A method according to claim 1, wherein the bioresponse signals for hatching eggs are chosen from at least one of eggshell temperature, weight loss, pulse, blood pressure, respiration, growth, growth rate, activity, heat production, moisture production, and sound production.

Claim 4. (**WITHDRAWN**): A method according to claim 1, wherein the bioresponse signals for hatching eggs in the said microenvironments are chosen from at least one of temperature, gas concentrations, sound intensity and sound frequency.

Claim 5. (**WITHDRAWN**): A method according to claim 1, wherein the living space control model comprises an intelligent control algorithm for a process control based on at least one of a model-based control with prediction and a process control with fuzzy logic.

Claim 6. (**WITHDRAWN**): A method according to claim 1, wherein the living space control model controls the hatching out according to directions obtained and determined after expertise.

Claim 7. (**WITHDRAWN**): A method for hatching out hatching eggs, including regulating the climate conditions in an incubator during the hatching process, including the setting, the measuring and the monitoring, as well as the adjusting of gas concentrations and climate parameters including at least one of air temperature, air humidity, carbonic acid content, and oxygen content, and further the measuring of egg temperatures of at least a number of hatching eggs, wherein the method successively comprises the following steps:

- entering a hatching egg target temperature Tep into the control at the start of the hatching process;
- measuring the egg temperature Te at a determined point in time after the start;
- comparing the measured Te and Tep, wherein, in the case of a difference between Te and Tep, an air temperature signal for adjusting the air temperature Ta according to an air temperature regulation is delivered; and
- repeating these steps during the hatching process at a determined next point in time.

Claim 8. (**WITHDRAWN**): A method according to claim 7, wherein the air temperature regulation for adjusting the air temperature Ta successively comprises the following steps:

- entering an air target temperature Tap into the control at the start of the hatching process, wherein, further, an air temperature control range A is entered between limit temperatures Tap(min) and Tap(max), with $Tap(min) < Tap < Tap(max)$;
- measuring the air temperature Ta at a determined point in time after the start;

- comparing the measured Ta with the temperatures in A, wherein, in the case that Ta has increased or decreased by a predetermined difference, the air temperatures are adjusted according to a determined control scheme; and
- repeating these steps during the hatching process at a determined next point in time.

Claim 9. (**WITHDRAWN**): A method according to claim 8, wherein when the air temperature Ta exceeds one of the limit temperatures of A, an alarm signal is delivered.

Claim 10. (**WITHDRAWN**): A method according to claim 7, wherein the egg temperature is contactlessly measured.

Claim 11. (**WITHDRAWN**): A method according to claim 10, wherein the egg temperatures are measured with an apparatus for measuring, with infrared thermometers, temperatures of hatching eggs placed in nests of hatching trays which are arranged in an incubator, wherein, for a preselected number of trays, the temperature is measured of a predetermined number of eggs, wherein during the hatching period, each individual thermometer contactlessly measures the temperature of a corresponding individual egg according to a pre-entered measurement scheme, wherein the measuring signals obtained control a temperature control regulation.

Claim 12. (**Currently Amended**): An apparatus for measuring, with infrared thermometers, temperatures of hatching eggs placed in nests of hatching trays which are arranged in an incubator, wherein, for a preselected number of trays, the temperature is measured of a predetermined number of eggs, wherein during the hatching period, each individual thermometer contactlessly measures the temperature around ~~of~~ a corresponding individual egg arranged in the incubator according to a pre-entered measurement scheme, wherein the measuring signals obtained control a temperature control regulation.

Claim 13. (**Currently Amended**): An apparatus for measuring, with infrared thermometers, temperatures of hatching eggs placed in nests of hatching trays which are arranged in an incubator, wherein, for a preselected number of trays, the temperature is measured of a predetermined number of eggs, wherein during the hatching period, each individual thermometer contactlessly measures the temperature of a corresponding individual egg according to a pre-entered measurement scheme, wherein the measuring signals obtained control a temperature control regulation ~~according to claim 12,~~ wherein the thermometers have been provided on holders which are placed on the hatching trays between the eggs, whereby the temperatures of at least two individual hatching eggs are measured.

Claim 14. (**Currently Amended**): An apparatus according to claim 12, wherein the apparatus further comprises a robot to automatically position ~~the~~ holders near the hatching eggs.

Claim 15. (**Previously Presented**): An apparatus according to claim 12, wherein the apparatus is used for carrying out a method for processing bioresponse signals coming from organisms living in a well-defined living space, which are each comprised in a microenvironment, wherein signals are obtained in online measuring of bioresponse variables, the bioresponse signals being processed in at least real-time in a signal processor, wherein the organisms are monitored in the said microenvironments, the bioresponse variables being adjusted by corresponding signal control apparatuses in accordance with a living space control model, wherein the living space comprises an incubator for hatching out hatching eggs, wherein the bioresponse variables are measured and controlled by at least one of optical, electrical, magnetic, acoustic or mechanical bioresponse signals.

Claim 16. (**Previously Presented**): An apparatus according to claim 15, wherein the bioresponse signals are non-invasively measured.

Claim 17. (**Previously Presented**): An apparatus according to claim 15, wherein the bioresponse signals for hatching eggs are chosen from at least one of eggshell temperature, weight loss, pulse, blood pressure, respiration, growth, growth rate, activity, heat production, moisture production, and sound production.

Claim 18. (**Previously Presented**): An apparatus according to claim 15, wherein the bioresponse signals for hatching eggs in the said microenvironments are chosen from at least one of temperature, gas concentrations, sound intensity and sound frequency.

Claim 19. (**Previously Presented**): An apparatus according to claim 15, wherein the living space control model comprises an intelligent control algorithm for a process control based on at least one of a model-based control with prediction and a process control with fuzzy logic.

Claim 20. (**Currently Amended**): An apparatus according to claim 15, wherein the living space control model controls the hatching out according to information obtained from previously hatched eggs in the microenvironment ~~directions obtained and determined after expertise~~.

Claim 21. (**Currently Amended**): An apparatus according to claim 15, wherein ~~the~~ climate conditions are regulated in an incubator during the hatching process, including the setting, the measuring and the monitoring, as well as the adjusting of gas concentrations and climate parameters including at least one of air temperature, air humidity, carbonic acid content, and oxygen content, and further the measuring of egg temperatures of at least a number of hatching eggs, wherein the air temperature is regulated by ~~method successively comprises the following steps~~:

- entering a hatching egg target temperature Tep into the control at the start of the hatching process;
- measuring the egg temperature Te at a determined point in time after the start;

- comparing the measured Te and Tep, wherein, in the case of a difference between Te and Tep, an air temperature signal for adjusting the air temperature Ta according to an air temperature regulation is delivered; and
- repeating these steps during the hatching process at a determined next point in time.

Claim 22. (**Currently Amended**): An apparatus according to claim 21, wherein the air temperature regulation for adjusting the air temperature Ta successively includes ~~comprises the following steps~~:
- entering an air target temperature Tap into the control at the start of the hatching process, wherein, further, an air temperature control range A is entered between limit temperatures Tap(min) and Tap(max), with Tap(min) < Tap < Tap(max);
- measuring the air temperature Ta at a determined point in time after the start;
- comparing the measured Ta with the temperatures in A, wherein, in the case that Ta has increased or decreased by a predetermined difference, the air temperatures are adjusted according to a determined control scheme; and
- repeating these steps during the hatching process at a determined next point in time.

Claim 23. (**Previously Presented**): An apparatus according to claim 22, wherein when the air temperature Ta exceeds one of the limit temperatures of A, an alarm signal is delivered.

Claim 24. (**Previously Presented**): An apparatus according to claim 21, wherein the egg temperature is contactlessly measured.

Claim 25. (**Previously Presented**): An apparatus according to claim 24, wherein the egg temperatures are measured with an apparatus for measuring, with infrared thermometers, temperatures of hatching eggs placed in nests of hatching trays which are arranged in an incubator, wherein, for a preselected number of trays, the temperature is measured of a predetermined number of eggs, wherein during the hatching period, each individual thermometer

contactlessly measures the temperature of a corresponding individual egg according to a pre-entered measurement scheme, wherein the measuring signals obtained control a temperature control regulation.

Claim 26. (**Previously Presented**): An apparatus according to claim 12, wherein the apparatus comprises a holder part and a lid part, the holder part including a bottom provided with two plug-in units and a plug-in slot enabling clamping of the apparatus in at least one of compartments and nests.

Claim 27. (**Previously Presented**): An apparatus according to claim 12, wherein the infrared thermometers are calibrated for different hatching chambers.

Claim 28. (**Previously Presented**): An apparatus according to claim 12, wherein the predetermined number of eggs is four.

Claim 29. (**Previously Presented**): An apparatus according to claim 12, wherein the infrared thermometers are arranged to measure the egg temperature at regular points in time.